



WEEKLY OVERSIGHT REPORT

CH2MHILL

Weekly Summary Report

USEPA Oversight, Sauget Area 2, Sauget, IL

WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday April 2, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from March 29 through April 2, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of barrier wall trenching and backfilling.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
PSI (geotechnical testing subcontractor)
Lowry Electric (electrical contractor to Solutia)
URS (primary consultant for Solutia)

Work Performed This Week

Work at the site continued with a crew of Inquip operators and laborers performing site and trench maintenance activities. Barrier wall excavation resumed during the week with an additional length of trench excavated at the southernmost section of the barrier wall (near station 10+60) and a panel south of the box culvert location. Backfill materials were placed into the trench each day of the week.

Groundwater Migration Control System (GMCS)

During the week, the river elevation decreased from approximately 398.5 feet above mean sea level (amsl) on March 29 to 398 ft amsl on March 31, 2004. Subsequently, the river elevation started an increasing trend to 399.65 ft amsl on April 2. Consequently, the combined flow rate of the GMCS increased from about 723 gallons per minute (gpm) on March 29 to about 786 gpm on March 31 and then decreased to approximately 680 gpm on April 2.

The eight barrier wall piezometers, with four inside and the other four outside the barrier wall alignment, continued to indicate water elevations lower than the river level throughout the week. Table 1 shows the river and piezometer water elevations measured on April 2, 2004 (2:10 PM).

At areas where barrier wall is in place or partially in place, the water elevations at the piezometers located west (hydraulically downgradient) of the barrier wall were generally within three to five feet higher than those at the piezometers located east (hydraulically upgradient) of the barrier wall for the entire week. This does not apply to the two pairs of piezometers located at the north and south ends of Site R (P1S/P1N and P4E/P4S) where the barrier wall does not yet exist. The water elevations in these two pairs of piezometers were about the same, and this is believed to be because of the current absence of barrier wall at these locations and also because each pair of these piezometers are aligned north-

south, which is parallel to the river and perpendicular to the general groundwater flow direction.

TABLE 1
River and Piezometer Water Elevations – April 2, 2004 (14:10 PM)

	Elevation (ft above mean sea level)
River Level	399.65
Piezometer 1S – inside wall (northern-most pair)	391.77
Piezometer 1N – outside wall (northern-most pair)	391.20
Piezometer 2E – inside wall (north-central pair)	390.86
Piezometer 2W – outside wall (north-central pair)	394.66
Piezometer 3E – inside wall (south-central pair)	390.66
Piezometer 3W – outside wall (south-central pair)	393.03
Piezometer 4E – inside wall (southern-most pair)	391.66
Piezometer 4W – outside wall (southern-most pair)	391.51

Stormwater

Rain during the previous weekend and on March 29 caused significant pooling of stormwater within the exclusion zone. Starting the morning of March 27, Inquip started to pump the accumulated stormwater from within the exclusion zone into the north modutank. Stormwater pumping continued on March 29 and March 30. The accumulated stormwater in the modutank will be discharged to American Bottom Treatment Facility next week for further treatment.

Slurry Mixing

No fresh slurry was mixed this week.

Spoils Handling

During the week, spoils were transferred from the southern portion of the exclusion zone adjacent to the barrier wall trench to the northern portion of Site R for more backfill mixing.

Barrier Wall Construction

Inquip started additional barrier wall excavation east of station 10+60. As of April 2, the open trench was approximately 1,380 feet in length along the barrier wall alignment from station 9+60 towards station 23+40 (please refer to Solutia's map for locations). In general, a small backhoe was used to excavate the first 10 feet, then the KH1266 trackhoe continued trenching up to 75 feet in depth, while the hydraulic clamshell rig was used subsequently to complete the excavation down to bedrock. In addition, one panel width of trench was excavated immediately south of the box culvert location using the mechanical clamshell. The trench depth at this location reached 70 feet at the end of the week.

Bentonite slurry was pumped into the panel south of the box culvert location as needed to keep the excavation open. The slurry, collected from the top and the bottom of the trench at station 13+00, was tested for viscosity, density (unit weight), filtrate loss, pH and sand

content during the week. Six of the eight bottom trench slurry samples and one of the four top trench slurry samples exceeded the viscosity specification (with results between 103 and 137 seconds to pass through the Marsh Funnel; the specification is between 40 to 100 seconds). The results for density, filtrate loss, pH, and sand content in these samples generally met the specifications.

During the week, Inquip mixed and placed into the trench approximately 1,500 cubic yards of backfill material. The backfill consists of spoils with the addition of approximately 2 percent granular bentonite in dry weight. Backfill was "back-tracked" into the trench using a bulldozer. The backfill was tested by PSI for slump, unit weight and moisture content. All test results met the minimum requirements. Additional tests on the backfill, including permeability and gradation, were to be tested offsite by Inquip's contract laboratory.

Prior to the backfill operation, the bottom of trench was cleaned thoroughly using the hydraulic clamshell rig. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and confirmed in two locations manually with the downrigger (plumbob on wire). Additionally, two samples with a clam sampler were collected by URS and PSI from the top of the placed backfill in the trench prior to adding more backfill. These backfill samples were visually checked to ensure that the trench bottom was clean and free of any sand.

During the week, the trench depths were measured twice each day, in the morning and at the end of the day. The measurement was made every 100 linear feet of trench, with 20-foot spacing of measurements on either side of the backfill toe. The trench depth measurements from April 2 (after the backfill placement into the trench) are shown in Table 2. The trench profile is depicted in Graph 1, and is compared to the trench depth profile measured end of the previous week (March 26). Graph 2 shows the overall progress of the barrier wall construction.

Other Activities

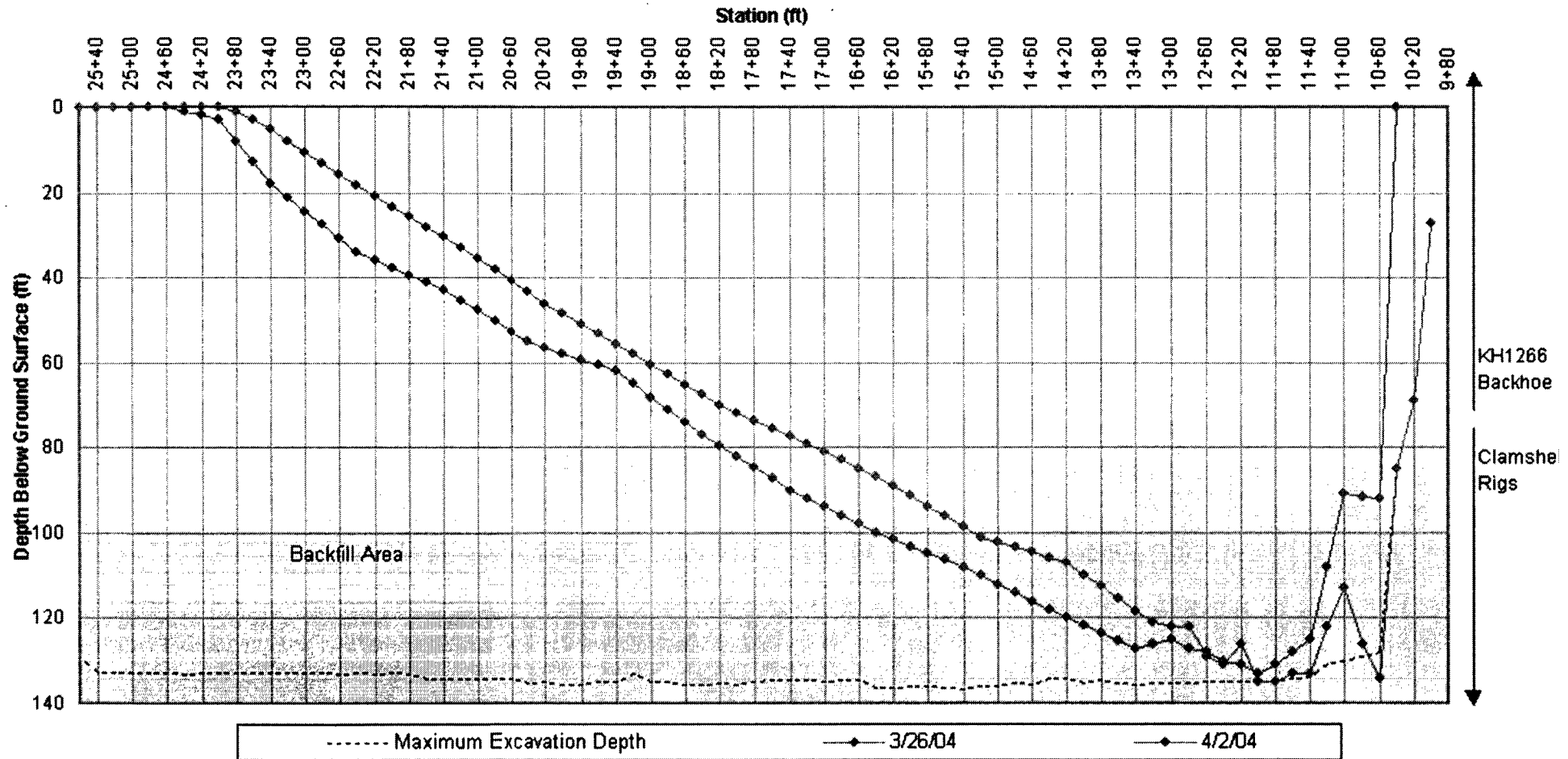
Lowry Electric was onsite during the week to upgrade the internet service for the trailers.

TABLE 2

Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – April 2, 2004 (PM)

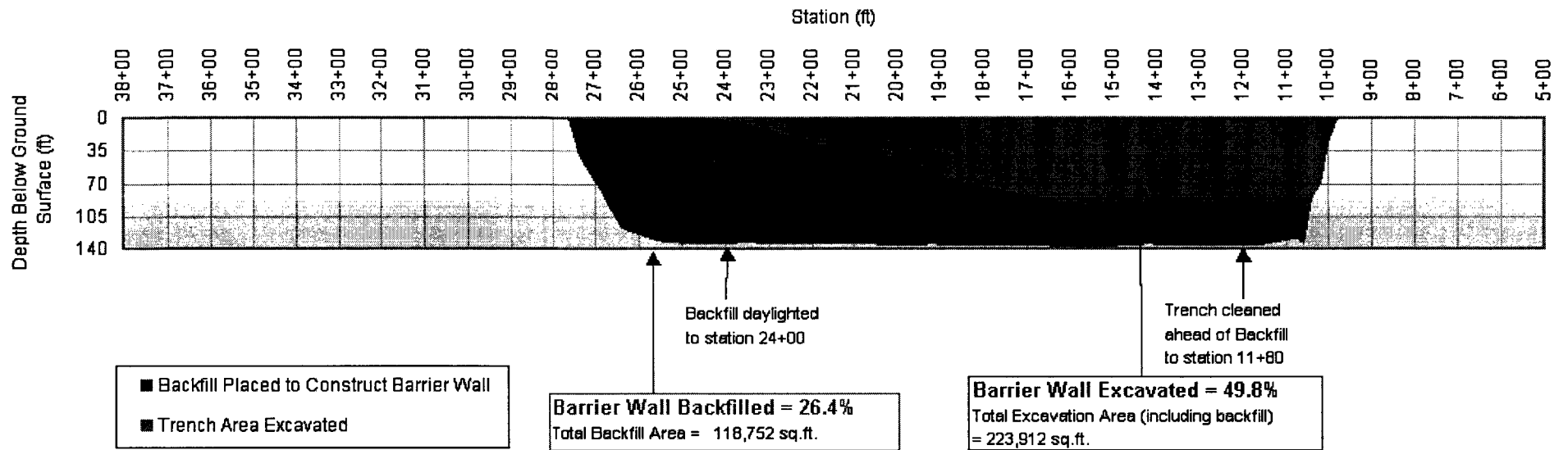
Station ID	Depth to bottom (ft below ground surface)
9+60	27
10+20	69
10+40	85
10+60	134
10+80	126
10+90	121
11+00	113
11+20	122
11+40	133
11+60	133
11+80	135
12+00	135
12+20	126
12+40	131
12+60	129
12+80	122
13+00	122
13+20	121
14+20	107
15+20	101
16+20	89
17+20	79
18+20	70
19+20	58
20+20	46
21+20	33
22+20	21
23+20	8
23+40	5

**Graph 1 - Weekly Barrier Wall Construction Progress
March 26 to April 2, 2004**



Note: Data plotted for week through AM measurements on 3-26-04 and PM measurements on 4-2-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2 - Barrier Wall Construction Progress by April 2, 2004 (PM)

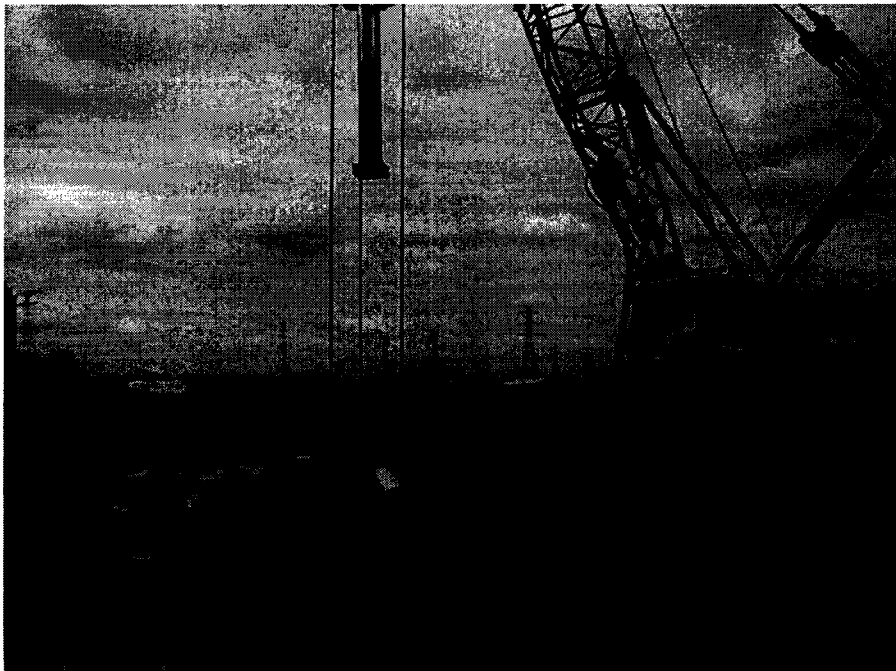


Note: Data plotted for week through PM measurements on 4-2-04.

Photos from March 29 through April 2, 2004:



Barrier wall excavation east of station 10+60 using the hydraulic clamshell rig (March 31, 2004).



Barrier wall excavation at location immediately south of the box culvert using the mechanical clamshell rig (April 1, 2004).